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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,997	06/23/2003	Yi Cheng	MP0289	1613
23624	7590	01/19/2005	EXAMINER	
MARVELL SEMICONDUCTOR, INC. INTELLECTUAL PROPERTY DEPARTMENT 700 FIRST AVENUE, MS# 509 SUNNYVALE, CA 94089			LAM, TUAN THIEU	
			ART UNIT	PAPER NUMBER
			2816	

DATE MAILED: 01/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/602,997

Applicant(s)

CHENG, YI

Examiner

Tuan T. Lam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) See Continuation Sheet is/are allowed.
- 6) ☒ Claim(s) See Continuation Sheet is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Continuation of Disposition of Claims: Claims pending in the application are 1-3,5,6,8,10-20,22-32,34-44,46-56,58-68,70-80,82-92,94-104 and 106-140.

Continuation of Disposition of Claims: Claims allowed are 1-3,5,6,10-12,16,17,22-24,28-32,34-36,41-44,46-48,50,51,54-56,58-60,64-68,70-71,76-80,82,84-88,91,92,97,99,100,103,104,106,109,111,112 and 115-134.

Continuation of Disposition of Claims: Claims rejected are 8, 13-15, 18-20, 25-27, 37-40, 49, 52-53, 61-63, 72-75, 83, 89-90, 95-96, 98, 101- 102, 107-108, 110, 113-114 and 135-140 .

### **DETAILED ACTION**

This is a response to the amendment filed 11/12/2004. Claims 1-3, 5-6, 8, 10-20, 22-32, 34-44, 46-56, 58-68, 70-80, 82-92, 94-104 and 106-140 are pending.

#### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8, 13-15, 18-20, 25-27, 37-40, 49, 52-53, 61-63, 73-75, 83, 89-90, 95-96, 98, 101-102, 107-108, 110, 113-114 and 135-140 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8, the recitation of “the hysteresis delay circuit’ lacks proper antecedent basis.

In claims 13 and 14 the recitation of “a first programmable circuit control signal” is indefinite because it is inconsistent with “the first programmable control signal” as called for in claim 10.

In claims 18 and 20 the recitation of “a third programmable circuit” lacks proper antecedent basis because there is no second programmable circuit cited.

In claims 25-26, the recitation of “the first programmable circuit control signal” is indefinite because it is inconsistent with “the first programmable control signal” as called for in claim 22.

In claims 37-38, the recitation of “the first programmable circuit control signal” is indefinite because it is inconsistent with “the first programmable control information” as cited in claim 34.

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In claim 40, the recitation of “the second programmable control signal” is indefinite because it is inconsistent with “the second programmable control information” as cited in claim 34.

In claim 49, the recitation of “a second programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 46.

Claims 52-53, the recitation of “first programmable control signals” is indefinite because it is inconsistent with “the first programmable control signal” as called for in claim 46.

In claim 61, the recitation of “a second programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 58.

In claim 62, the recitation of “a first programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 58.

In claim 73, the recitation of “a second programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 70.

In claim 74, the recitation of “a first programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 70.

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In claim 83, the recitation of “a third programmable circuit” and “third programmable control signal” lacks proper antecedent basis because there is no second programmable circuit and second programmable control signal cited.

In claims 86-87, the recitation of “a first programmable circuit control signal” is indefinite because it is inconsistent with “the second programmable control signal” as called for in claim 82.

In claim 95, the recitation of “third programmable control signal” lacks proper antecedent basis because there is no second programmable control signal cited.

In claim 96, the recitation of “third programmable control signals” lacks antecedent basis.

In claim 98, the recitation of “the first programmable circuit control signal” is indefinite because it is inconsistent with “the first programmable control signal” as called for in claim 94.

In claim 107, the recitation of “third programmable control signal” lacks proper antecedent basis because there is no second programmable control signal cited.

In claim 108, the recitation of “third programmable control signals” lacks antecedent basis.

In claim 110, the recitation of “the first programmable circuit control signal” is indefinite because it is inconsistent with “the first programmable control signal” as called for in claim 106.

In claims 135, 137 and 139, the recitation of “said first input signal, said second input signal” lacks proper antecedent basis.

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Claims 15, 19, 27, 39, 63, 75, 88, 89-90, 101, 102, 113, 114, 136, 138 and 140 are indefinite because of the technical deficiencies of claims 14, 18, 26, 38, 58, 74, 83, 87, 95, 107, 135 and 139.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claim 72 remains rejected under 35 U.S.C. 102(b) as being anticipated by Garrett, Jr. et al. (USP 6,094,075), prior art of record. Figure 7B of Garrett, Jr. shows a programmable comparator comprising a first programmable circuit (switches M1 coupled to capacitors) operable to selectively provide a hysteresis delay in response to a first programmable control signal (signal controls switches M1), a comparator circuit (N5, N6, P9, P10, N71), responsive to first programmable circuit, to receive a first and a second input signals (per-minus, per-plus) in response to the hysteresis delay and provide a digital output signal (Q) in response to result of the comparison between the first and second input signals, wherein the first and second input signal are mixed via transistors N5 and N6 as called for in claim 72.

***Response to Arguments***

2. Applicant's arguments filed 11/12/2004 have been fully considered but they are not persuasive. In the Allowable Subject Matter of the Office action dated on 8/23/2004, the Examiner inadvertently has indicated claim 72 being objected to as having allowable subject matter. This is an inadvertently mistake because page 5 of the same Office action detailing as to

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how claim 72 being anticipated under 35USC 102(b) by Garrett, Jr. et al. (USP 6,094,075).

Therefore, The finality rejection of claim 72 is deemed to be proper.

***Allowable Subject Matter***

3. Claims 8, 13-15, 18-20, 25-27, 37-40, 49, 52-53, 61-63, 73-75, 83, 89-90, 95-96, 98, 101-102, 107-108, 110, 113-114 and 135-140 would be allowable if rewritten or amended to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action.

4. Claims 1-3, 5-6, 10-12, 16-17, 22-24, 28-32, 34-36, 41-44, 46-48, 50-51, 54-56, 58-60, 64-68, 70-71, 76-80, 82, 84-88, 91-92, 97, 99-100, 103-104, 106, 109, 111-112 and 115-134 are presently allowed.

***Conclusion***

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan T. Lam whose telephone number is 571-272-1744. The examiner can normally be reached on Monday to Friday (7:30 am to 6:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TIMOTHY P CALLAHAN can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Tuan T. Lam', with a long horizontal flourish extending to the right.

Tuan T. Lam  
Primary Examiner  
Art Unit 2816

1/15/2005